

Package Contents

Remove all items from the box and make sure the box contains the following items:

Power Supply / Cord

IR Remote & Mouse

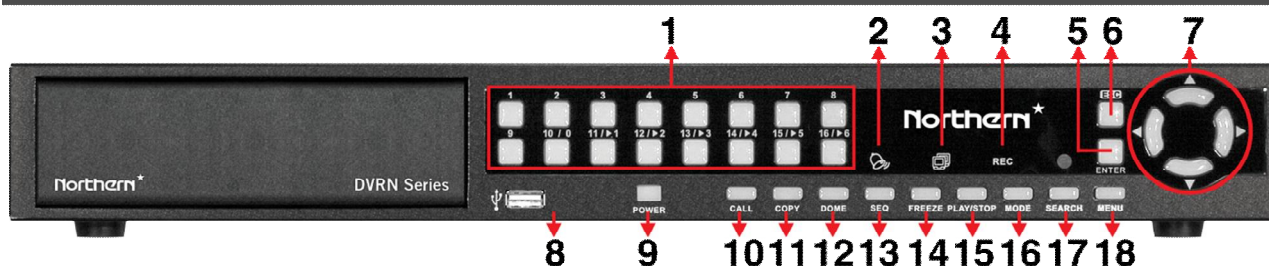
Audio & Alarm Cables

Manuals & Disc

Rack Ears



Front Panel

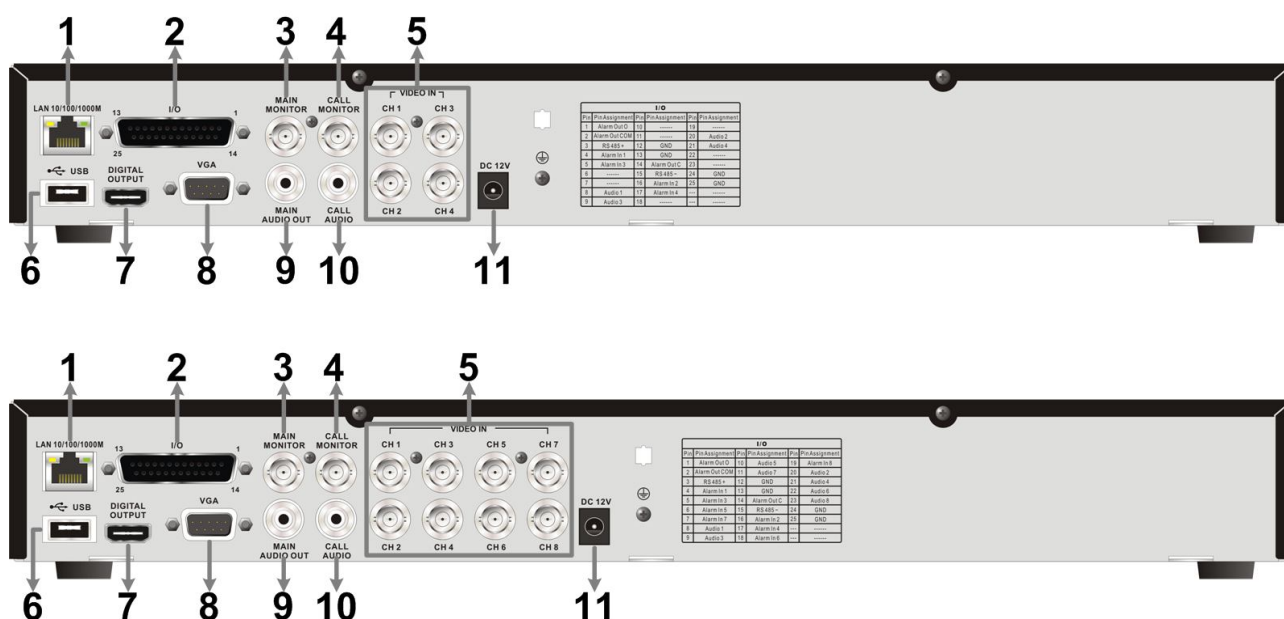


1	Channels	1. In Live and Playback modes, press any key to view the corresponding video in full-screen. 2. In input interface, 1~10 can be used for direct input of numbers 0~9. 3. In Dome Camera Control mode, 1 is for entering the Set/ Go preset menu; 11~16 is for quick access of preset points 1~6.
2	Alarm LED	It lights up when an alarm is triggered.
3	Network LED	It lights up when network is connected. In addition, it blinks when data is being transmitted via the network.
4	Record LED	It blinks when videos are being recorded.
5	ENTER	1. In OSD menu or selection interface, press these key to make the selection or save settings. 2. In live full-screen viewing mode, press this key to view a 2× zoom image; press it again to return.
6	ESC	Press this key to cancel or exit from certain control mode.
7	Direction Keys	1. In Zoom mode, these keys function as normal direction keys. 2. In the OSD setup menu, the direction keys are used to move the cursor to previous or next fields. To change the value in the selected field, press UP / DOWN keys.
8	USB 2.0 Port	The USB 2.0 port allows users to connect an external USB device to the unit, such as a USB ThumbDrive or a USB mouse.
9	Power Key	Press and hold this key to trigger the quick shutdown function.
10	CALL	Press this key to enter Call Monitor Control mode.
11	COPY	This key is used for marking time in quick video export function.
12	DOME	Press this key to enter Dome Camera Control mode.
13	SEQUENCE	Press this key to start automatic sequence display of cameras.
14	FREEZE	Press this key to freeze the current viewing screen.

15	PLAY/STOP	Press once to start the playback of recorded video. Press again to exit.
16	MODE	Press this key to view in full-screen or multiple window modes.
17	SEARCH	Press this key to search recorded video by date/time or event.
18	MENU	Press this key to enter the OSD setup menu.

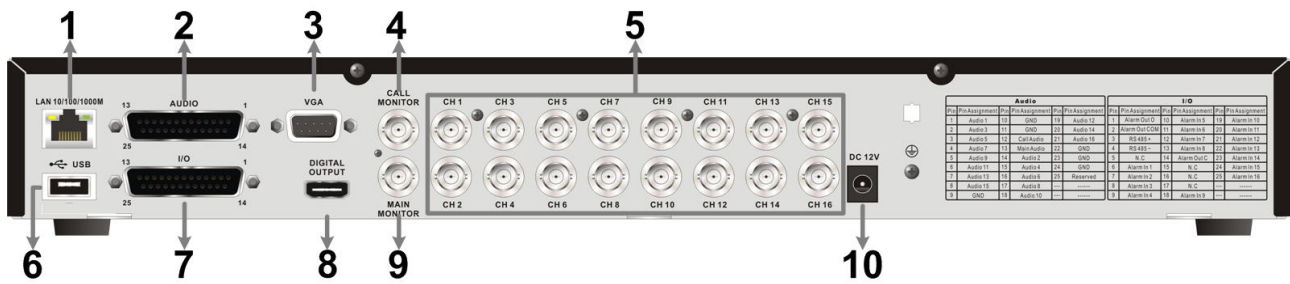
Rear Panel

4CH/8CH models:



1	LAN 10/100/1000M (RJ-45)	The DVR is capable of networking. Once the unit is connected to the LAN network, users can remotely access the DVR through the remote software on a PC.
2	Alarm I/O, RS-485 & Audio In	The D-Sub connector provides alarm I/O, RS-485 & Audio In ports that offer users the flexibility to connect required devices to the DVR.
3	Main Monitor – BNC	The DVR can connect to a BNC monitor via the BNC connector.
4	Call Monitor (BNC)	The BNC Call Monitor connector allows users to connect the DVR with a call monitor.
5	Video In (BNC)	A group of BNC connectors is provided for video input streams from installed cameras. The DVR will detect video source of CH1 and automatically adjust the system to NTSC or PAL video system.
6	USB Port	This USB port allows users to connect a USB mouse with PS/2 protocol.
7	Main Monitor – Digital Output	The DVR can connect to a Digital Output monitor via an optional Digital Output connector.
8	Main Monitor – VGA	The DVR can connect a VGA monitor via the VGA connector.
9	Main Monitor Audio Out	Main Monitor Audio Out RCA connectors are provided for the DVR to connect audio output devices (e.g. amplified speakers).
10	Call Monitor Audio Out	Call Monitor Audio Out RCA connectors are provided for the DVR to connect audio output devices (e.g. amplified speakers).
11	Power Jack	The DVR has a free voltage DC power connection jack. Please connect the power supply adapter shipped with the unit.

16CH models:



1	LAN 10/100/1000M (RJ-45)	The DVR is capable of networking. Once the unit is connected to the LAN network, users can remotely access the DVR through the remote software on a PC.
2	Audio	A D-Sub Audio connector is provided for the DVR to connect audio source devices and Main/Call monitors audio output devices.
3	Main Monitor – VGA	The DVR can connect a VGA monitor via the VGA connector.
4	Call Monitor (BNC)	The call monitor is used to display full screen video of all installed cameras in sequence. The BNC Call Monitor connector allows users to connect the DVR with an optional call monitor.
5	Video In (BNC)	A group of BNC connectors is provided for video input streams from installed cameras.
6	USB Port	This USB port allows users to connect a USB mouse with PS/2 protocol.
7	Alarm I/O & RS-485	The DVR provides alarm I/O and RS485 ports that offer users the flexibility required to connect the DVR to other devices.
8	Main Monitor – Digital Output	The DVR can connect to a Digital Output monitor via an optional Digital Output connector.
9	Main Monitor- BNC	The DVR can connect to a monitor via a BNC connector.
10	Power Jack	The DVR has a 12V DC power connection jack. Please connect the power supply adapter shipped with the unit.

Pin Definition of Alarm I/O & RS-485, and Audio In

4CH models:

Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	Alarm Out Open	8	Audio In 1	15	RS485 D-	22	Reserved
2	Alarm Out COM	9	Audio In 3	16	Alarm In 2	23	Reserved
3	RS485 D+	10	Reserved	17	Alarm In 4	24	GND
4	Alarm In 1	11	Reserved	18	Reserved	25	GND
5	Alarm In 3	12	GND	19	Reserved		
6	Reserved	13	GND	20	Audio In 2		
7	Reserved	14	Alarm Out Close	21	Audio In 4		

8CH models:

Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	Alarm Out Open	8	Audio In 1	15	RS485 D-	22	Audio In 6
2	Alarm Out COM	9	Audio In 3	16	Alarm In 2	23	Audio In 8
3	RS485 D+	10	Audio In 5	17	Alarm In 4	24	GND
4	Alarm In 1	11	Audio In 7	18	Alarm In 6	25	GND
5	Alarm In 3	12	GND	19	Alarm In 8		
6	Alarm In 5	13	GND	20	Audio In 2		
7	Alarm In 7	14	Alarm Out Close	21	Audio In 4		

16CH models:

Audio:

Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	Audio 1	8	Audio 15	15	Audio 4	22	GND
2	Audio 3	9	GND	16	Audio 6	23	GND
3	Audio 5	10	GND	17	Audio 8	24	GND
4	Audio 7	11	GND	18	Audio 10	25	Reserved
5	Audio 9	12	Call Audio	19	Audio 12		
6	Audio 11	13	Main Audio	20	Audio 14		
7	Audio 13	14	Audio 2	21	Audio 16		

Alarm I/O & RS-485:

Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	Alarm Out Open	8	Alarm In 3	15	Reserved	22	Alarm In 13
2	Alarm Out COM	9	Alarm In 4	16	Reserved	23	Alarm In 14
3	RS485 D+	10	Alarm In 5	17	Reserved	24	Alarm In 15
4	RS485 D-	11	Alarm In 6	18	Alarm In 9	25	Alarm In 16
5	Reserved	12	Alarm In 7	19	Alarm In 10		
6	Alarm In 1	13	Alarm In 8	20	Alarm In 11		
7	Alarm In 2	14	Alarm Out Close	21	Alarm In 12		

Power On the DVR

Please follow the proper power on procedures to avoid damaging the DVR.

- Connect all necessary components, e.g. monitor and cameras, before power on the DVR.
- Check the type of power source before connecting the power adaptor to the DVR. The acceptable power input is between AC110V ~ AC240V.

Select Viewing Mode:

- Press **MODE** repeatedly to select the wanted display mode. The available viewing modes are full-screen, 2×2, 3×3, and 4×4 split-window.
- Press **FREEZE** to pause the current viewing image.

Basic Setup

Enter the OSD main menu and setup some basic configuration of the DVR. The basic configuration can be set via either the DVR or **DVRRemote**, the remote software.

Enter OSD Main Menu:

- Press **MENU** to enter the OSD main menu.
- Select the administrator account “**admin**” to login. Enter the preset password “**1234**”.
- It is strongly suggested to change the password to prevent unauthorized access.

Date / Time Setting:

Follow steps below to setup date/time before the recording starts. Refer to the User's Manual for advanced setup of Time Sync function.

- Select <**Date/Time**> in System Setup menu.
- Select the date and time using **LEFT/RIGHT** keys; then adjust the value using **UP/DOWN** keys.
- The new date and time settings take effect after the changes are confirmed.

Language Setting:

If users wish to change language of the DVR system, follow the steps below.

- Select <**Language**> in System Setup menu and press **ENTER**.
- Press the **UP/DOWN** keys to select the desired language.

Network Setup

Configure the LAN setup for the DVR to properly function with Ethernet connection.

- From OSD main menu, select **<System Setup>** → **<Network Setup>**, set the **<LAN Select>** item to **<LAN>** or **<PPPoE>** according to the network application, and enter **<LAN Setup>**.
- For DHCP user, set the DHCP to **<ON>**. The IP address, Netmask, Gateway and DNS settings are retrieved from network servers. DHCP is dynamic that the settings change from time to time.
- For Non-DHCP user, set the DHCP to **<OFF>**. Enter an IP address, Netmask, Gateway, and DNS settings. Please obtain the information from the network service provider.
- To change the IP address, Netmask, Gateway and DNS value, press **UP/DOWN** keys to move the cursor to the item. Use **LEFT/RIGHT** keys to access each section of the value and press **ENTER**, then change the value using **UP/DOWN** keys.
- PPPoE users must set the **<PPPoE Account>**, **<PPPoE Password>** and **<PPPoE Max Idle>** as well.
- When the settings are complete, press **ENTER** to confirm and save the settings; or **ESC** to abort.

Dome Camera Control

Dome Camera Connection & Settings:

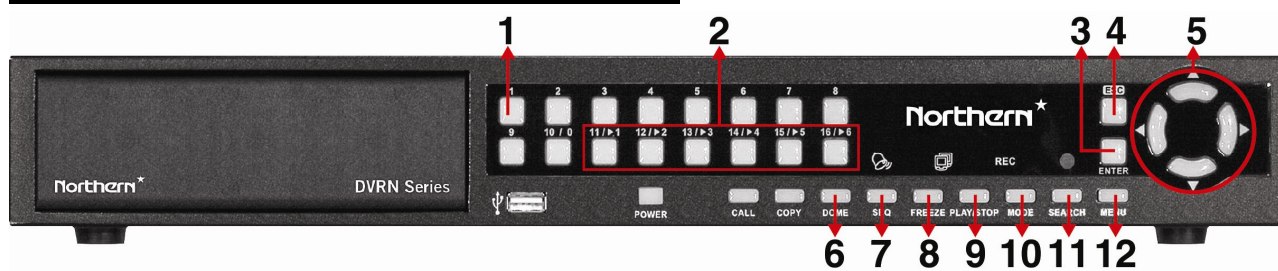
- See section [Pin Definition of Alarm I/O & RS-485, and Audio In](#) for RS-485 port pin definition.
- Refer to the following figure. Connect the R+, R- terminals on the dome camera to the D+, D- terminals on the RS-485 port by RS-485 cable respectively.





- To set up dome camera's protocol and ID, press **MENU** to access the OSD main menu, and select **<Camera Setup>**. Then select **<Dome Protocol>** and choose the corresponding protocol. Next select **<Dome ID>** and choose a preferred ID number. Note that the ID number must match the ID address defined by the dome camera.
- To configure the RS-485 parameters, select **<System Setup>** from OSD main menu, and then select **<RS485 Setup>**. The default RS-485 settings are 9600 Baud, 8 Data Bits, 1 Stop Bit and No Parity.

Control Buttons in Dome Camera Control Mode:



1	Set / Go Preset	5	Pan / Tilt	9	Iris Close
2	Go Presets 1~6	6	Enter Dome Camera Control Mode	10	Iris Open
3	Enter / Auto	7	Focus Near	11	Zoom Out
4	ESC	8	Focus Far	12	Zoom In

Basic Playback Operation

Search by Time:

- Press **SEARCH** to enter the Search menu.
- Move the cursor to “From” and press **ENTER** will start playing recorded video from the specified “From” time.
- Move the cursor to “End” and press **ENTER** will start playing recorded video from the specified “End” time.
- Move the cursor to “Select” and press **LEFT/RIGHT** to choose date/time. Press **ENTER** and adjust the values by **UP/DOWN** keys. Press **ENTER** again to confirm or press **ESC** to abort.
- Move the cursor to **<Begin Playback>** and press **ENTER** to start playing back recorded video of the selected time. Press **PLAY/STOP** again to return to live video.



NOTE: If there is no available recorded video that matches the specified time and date, the unit starts to playback from the next available video.

Search by Event:

- Press **SEARCH** to enter the Search menu.
- To search event video that was recorded on a specific camera, use **LEFT/RIGHT** keys to move the cursor and press **ENTER** to select or de-select a channel.
- Move the cursor to **<Event List>** and press **ENTER** to list the event video of the selected channels.
- The list displays each event by date, time, triggered camera and alarm type. The latest recorded event video will be listed on the top. To exit the event list, press **ESC**.
- Use **UP/DOWN** keys to scroll through the Event List. Press **ENTER** to play back the selected event record.



NOTE: The event list displays only the first 1024 events; as some events are deleted, others are displayed.

Playback Controls:

Button	Description
LEFT	The button is for rewinding the recorded video while playing back. Press the button repeatedly to increase the speed of reverse playback by 1x, 2x, 4x, 8x, 16x, or 32x.
RIGHT	The button is used to play the recorded video fast forward. Press the button repeatedly to increase the speed of forward playback by 1x, 2x, 4x, 8x, 16x, or 32x.
FREEZE	Press FREEZE to pause the playback video. When the recorded video is paused, press LEFT / RIGHT to resume playback video single step reverse / forward respectively. Press FREEZE again to continue playing back video.
PLAY	Press to start the playback or to stop playing back video and return to live mode.

DVR Status Bar Icons

Icons that will be displayed in the status bar are listed in the following table with their descriptions.

Item	Icon	Description	Item	Icon	Description
1		Main Monitor	14		Quick Export
2		Call Monitor	15		Stamp A
3		Monitor Active / Inactive	16		Stamp B
4		Sequence	17		Lock
5		Record	18		Disk Error
6		Event Record	19		Disk Full
7		Freeze @ Live Mode	20		Disk Overheat
8		Dome Camera Control	21		No Disk
9		Zoom	22		Disk Almost Full
10		Forward Playback Speed: 1x, 2x, 4x, 8x, 16x, 32x	23		HDD Usage
11		Pause @ Playback mode	24		Guest
12		Backward Playback Speed: 1x, 2x, 4x, 8x, 16x, 32x	25		User's Authority Level
13		End of Video	26		Fan Error

Connect the DVR via the Remote Software

Setup Requirements:

- Make sure the PC is connected to the Internet.
- Obtain IP address of the **DVR**. To check the DVR's IP address, press **MENU** on the front panel and select **<System Setup> → <Network Setup> → <LAN Setup> → <IP>** to check the IP.

Changing Internet Setting:

- Start the IE; select **<Tools>** from the main menu of the browser, then **<Internet Options>** and then click the **<Security>** tab.
- Select **<Trusted sites>** and click **<Sites>** to specify its security setting.
- Uncheck "Require server verification (https:) for all sites in this zone". Type the IP address of the unit in field and click **<Add>** to add this website to the zone.
- In the Security Level area, click **<Custom Level>**. Under **<ActiveX controls and plug-ins>**, set all items to **<Enable>** or **<Prompt>**.
- Click **<OK>** to accept the settings and close the **<Security Settings>** screen.

Using the Remote Software:

- Start the IE and enter the IP address of the **DVR** in the address bar.
- The ActiveX controls and plug-ins dialog will show twice for confirmation; click **<YES>** to accept ActiveX plug-ins. The **DVRRemote** plug-ins will be downloaded and installed on the PC automatically when the connection is successfully made.



NOTE: Do not enter any leading "0" characters in the address, for example, "192.068.080.006" should be entered "192.68.80.6".



NOTE: If the default trigger port 80 is changed into another one, port 81 for example, then the IP address should be entered as "192.68.80.6:81".

- Version verification starts automatically to verify whether **DVRRemote** was installed. This process may take up to 30 seconds.
- When the software is completely downloaded and installed, the Login Screen is displayed.
- Enter the username and password. The default usernames and passwords are **admin / 1234** and **user / 4321**.

The following picture shows the display window of the DVR**Remote**:



Refer to the table below for brief description of functional items:

Item	Description	Item	Description
1	Select Picture Size	9	HDD Status
2	Download DVRPlayer	10	Playback Control
3	View Live Camera	11	Instant Recording
4	Playback Video	12	Audio On/Off
5	Setup Menu	13	Select Camera
6	Search Event List	14	Display Mode
7	Capture Snapshot	15	Bandwidth
8	4:3 Viewing Aspect	16	Dome Camera Control

For more information on DVR**Remote**, see User's Manual.

DVRRemote Playback

Playback Remote Video:

- Click **<Play>** on the main window toolbar, and then **<Remote Playback>** tab.
- The **<From>** and **<To>** on top of the screen display the date and time from which recorded video is available for playback.
- Choose **<Playback>** in **<Select>** field for playback recorded video.
- Select the date and time of the segment to play back from the **<Start>** field. The date and time can be changed either by typing desired numbers directly or using the arrow buttons.
- Click **<OK>** to start the playback, or click **<Close>** to abort.

Playback Local *.drv File:

- Click **<Play>** on the main window toolbar, and then **<Local Playback>** tab.
- Click **<Open>** and the file selection screen is displayed. Select the *.drv video file to playback and click **<OK>**.
- Click **<OK>** to start the playback, or click **<Cancel>** to abort.
- View the video playback using the Playback controls.
- To end the playback, click **<Live>** to return to live video.

Playback Local *.avi Files:

- Start the windows media player or other media player from **<Start>** menu (or any other possible access).
- Select **<File>** and then **<Open>**.
- Select the wanted *.avi file, and click **<Open>**.



NOTE: The *.avi files for each channel are stored separately. Therefore the video can be played back in single channel, full screen mode only.

Playback Event Video:

- Click **SEARCH** on the main window toolbar. The Event List appears.
- Scroll through the Event List and highlight the interested events.
- Double-click on the desired event to view the event video.

Playback Controls:

